

Heat treatment process for bearing component involves carbonitriding at specified temperature, cooling, re-heating and hardening at lower temperature

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Abstract of DE10254635

The steel of the component is carbonitrided at a temperature exceeding the A1 transition temperature, then cooled below it. The steel is re-heated to a hardening temperature (T2), no less than the A1 transition temperature, but less than the carbonitriding temperature. The steel is hardened. Preferred Features: The steel is hardened at a temperature of 790-830 deg C. Steel composition Steel remote from the hardened area contains, all on a wt. % basis: 0.6-1.2 C, 0.15-1.11 Si and 0.3-1.5 Mn. Under 2 wt. % Cr is included. Hydrogen content is below 0.5 ppm. The component includes a carbonitrided layer and austenitic grains exceeding a JIS Grain Size of No. 10. An Independent claim is included for a bearing component with austenitic grains of mean size not exceeding 8 microns .



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